TABLE 11

COMBUSTION OF PRODUCER GAS (SC-DSW)

Volumetri Compositi of Gas. Per Cent	B.t.u. per Cubic Feet of Elemen	B.t.u. per 100 Cubic Feet of Gas	0 Require	Products of Complete Combustion, Cubic Feet		
				$C0_2$	II_2O	N_2*
H_s	X	=	6.05		12.10	24.20
CH_4	X	=	5.20	2.60	5.20	20.80
CWBU	X1610.	=	1.20	0.80	0.80	4.80
CO	X	=	10.89	21.78		43.56
O_2			-0.02			-0.08
CO_0				5.68		
H_2O					3.82	
No						53.60
100.0 0	*Low*	14,233	23.32	30.86	21.92	146.88
H_20	X	=				
18.10	54.06	988				
	High	15,221				

Theoretical air supply = 23.32X5.00 = 116.60 cu ft per 100 cu ft of gas.

* Assuming the atmosphere to consist of 80 per cent N« and 20 per cent Os.

Air Per Cent	Supply Volumes	Excess Air	Products of Combustion of 100 Volumes of Gas				
			0_2	CO,	H_20	N_2	Total
100	116.60	0.00	0.00	30.86	21.92	146.88	199.66
120	139.92	23.32	4.64	30.86	21.92	165.53	222.98
140	163.24	46.64	9.09	30.86	21.92	184.19	246.30
180	209.88	93.28	18.18	30.86	21.92	221.50	292.94
			Percentage Basis (Wet)				
100			0.00	15.64	11.11	73.25	
120			2.00	14.03	9.97	73.94	
140			3.75	12.72	9.03	74.50	
180			6.31	10.71	7.50	75.37	
			Percentage Basis (Dry)				
100			0.00	17.60		82.40	
120			2.29	15.58		82.13	
140			4.12	13.97		81.91	
180			6.83	11.59		81.58	